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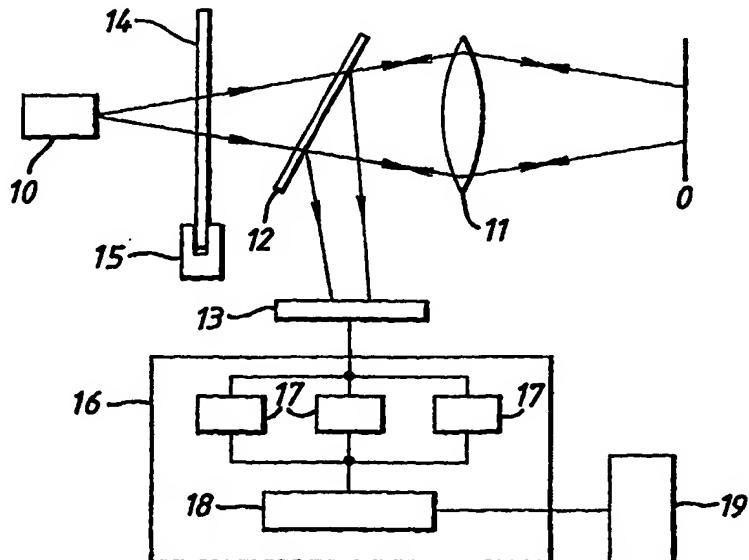
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(54) Title: MICROSCOPY IMAGING APPARATUS AND METHOD



(57) Abstract

An object is illuminated by a light source (10) and a periodic pattern of transparent and non-transparent stripes is superimposed onto the object (0). At least three images are recorded at different spatial phases of the pattern by means of a microscope of shallow focal depth, and a three-dimensional image containing only in-focus detail is then derived from the recorded images by image processing which removes the periodic pattern. An illumination mask (14) or the interference fringes of two coherent beams generate the periodic pattern. The different spatial phases are generated by shifting the mask or adjusting the temporal phase difference of the coherent beams.